

**Montgomery County, Maryland
Office of Internal Audit
(MCIA)**



**Capital Improvements Program:
MCDOT and DGS Generally Have Good Internal Controls for
Invoice Review but Improvements Needed**

September 13, 2011

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Highlights

Why MCIA Did this Audit

The Montgomery County FY11-16 Capital Improvements Program (CIP) includes over \$4 billion in capital projects. County government departments are allocated \$2.1 billion or 52.8% of the program. The Department of Transportation (MCDOT) and Department of General Services (DGS) have oversight and administrative responsibilities for approximately \$1.8 billion or 86% of the county government allocation. The majority of the expenditures under the program are incurred under contracts executed for project design and construction. Both the CIP and contracting were identified as areas of higher risk in the County-wide risk assessment completed by MCIA. We reviewed the policies and procedures for invoice review and approval for CIP projects undertaken by MCDOT and DGS.

What MCIA Recommends

MCIA is making seven recommendations to improve the performance and enhance the existing internal controls pertaining to invoice approval and payment. MCDOT and DGS concurred with the recommendations.

September 2011

CIP: MCDOT and DGS Have Good Internal Controls for Invoice Review but Improvements Needed

What We Found

The Department of Transportation (MCDOT) and Department of General Services (DGS) have designed procedures and internal controls for reviewing and approving invoices. However, in testing 30 invoices we identified eight exceptions in seven invoices where existing procedures were not performed as designed or procedures and controls could be strengthened to further ensure the County is receiving and paying for materials and labor contracted for in CIP projects.

We found the following areas where internal controls over the process need improvement such as (1) the documentation and review of expenses, routinely in the millions of dollars annually, incurred by utility companies to relocate items, such as poles or cables, on County MCDOT projects, (2) the need for sufficient information to conduct a line item review of costs for DGS projects and (3) the need to evidence the completion of the DGS project manager's walkthrough inspections, and (4) consistent performance of invoice review controls as designed for MCDOT and DGS.

With respect to the utility relocation documentation issue, without verifying the invoice amount to prior authorizing documentation or contractor supplied expenditure details the County could potentially pay for unreimbursable costs.

As to the line item review of costs incurred, we are unable to determine the reasonableness of materials and labor line items invoiced on 7 contracts and 11 invoices, as there is no previously agreed upon Schedule of Values that itemizes these expected costs in detail. This could lead to overcharging on contracts. As to the performance of project walkthroughs not being documented, we are unable to rely on the performance of this key mitigating control to confirm the quality or quantity of the materials or labor invoiced.

Additionally, we found an 18 month delay in payments by the County to a contractor for project expenses of \$700,000. The rationale for delaying payment was not fully documented in the project file and could not be provided by MCDOT.

We also noted four instances in which invoices were processed for payment by both MCDOT and DGS without the required evidence of review or approval by both a project manager and a team lead supervisor. Non-performance of the control activity as designed reduces the likelihood that errors or inappropriate charges will be detected.

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Objective

This report summarizes the work performed by Cherry, Bekaert & Holland, L.L.P. (CBH) in an internal audit of the Capital Improvements Program (CIP) in Montgomery County. The scope of this engagement included CIP projects performed during FY 2010 and FY 2011 from the FY09-14 and FY11-16 CIP. Project invoices selected for testing were processed in FY 2011. The objectives of our audit were as follows:

- Review and test the effectiveness of the County's processes and procedures for reviewing and processing invoices for payment on projects included in the Capital Improvement Program.
- Determine whether the County is ensuring that it is receiving the quality and amount of goods or services associated with invoices, as stipulated in the applicable contract.

This internal audit was performed in accordance with consulting standards established by the American Institute of Certified Public Accountants (AICPA) and generally accepted government auditing standards (GAGAS) established by the Government Accountability Office (GAO), as appropriate. Our proposed procedures, developed to meet the objectives stated above, were reviewed and approved in advance by Montgomery County Internal Audit (MCIA). Interviews, documentation review, and field work were conducted from August 2010 to May 2011.

Background

Overview

The Montgomery County Charter provides for an annual Capital Budget and a biennial six-year Capital Improvements Program. The CIP covers construction of all public buildings, roads, and other facilities planned by County agencies over a six-year period. It includes capital expenditure estimates, funding requirements, capital budget requests, and program data for all County departments and agencies. A new Capital Budget is developed annually and a new CIP is developed for six year periods beginning in odd-numbered fiscal years. Amendments to the CIP are developed in even-numbered fiscal years. In January of each year the County Executive submits a recommended Capital Budget and depending on the year a new CIP (odd years) or amendments to CIP (even years) to the County Council for consideration and approval. After receiving input from County residents through public hearings, the County Council reviews the details of the County Executive's Recommended Capital Budget and CIP. In June of each year the County Council approves the Capital Budget and CIP.

The amended FY 09-14 CIP, which was approved in fiscal year 2009, totaled \$3.7 billion¹. The approved FY11-16 CIP totaled over \$4 billion¹, which was a 7% increase over the prior program. Approximately \$2.1 billion (52.8%) of the FY11-16 CIP program total is allocated to County Government departments with the remainder allocated to Other Agencies (see table 1).

Table 1 – CIP by Agency Excluding Washington Suburban Sanitary Commission (WSSC)
(\$000s)

Agency	FY09-14 (Amended)	FY11-16 (Approved)
County Government	\$1,874,107	\$2,115,263
Housing Opportunities Commission	15,795	13,629
Montgomery County Public Schools	1,270,842	1,385,946

¹ The CIP for the Washington Suburban Sanitary Commission (WSSC) is excluded from program totals stated. CIP FY09-14 Amended \$980,895,000 CIP FY11-16 Approved - \$1,660,010,000

Agency	FY09-14 (Amended)	FY11-16 (Approved)
Maryland-National Capital Park & Planning Commission	198,980	166,141
Montgomery College	340,184	291,970
Revenue Authority	41,341	35,328
Washington Metropolitan Area Transit Authority	2,582	-
Total	\$3,743,831	\$4,008,277

Source: Approved FY11-16 Capital Improvements Program (CIP) – 5/27/2010

CIP Development

County departments and agencies prepare CIP requests within guidelines established by the County Executive (for the departments) and by law (for other agencies of government). The departments and agencies identify projects for the CIP based on the following criteria: project is identified as a community need; project is ready for development and/or construction; and the affordability of the project. The departments and agencies submit project requests to the Office of Management and Budget (OMB) for analysis. The OMB staff reviews each project request to ensure that County departments and agencies have properly performed their due diligence on the project and that project cost are properly supported. OMB and the respective requesting departments and agencies review the project requests with the County Executive. The County Executive has final authority to place projects in the CIP. In January, of each even numbered fiscal year the County Executive presents to the County Council a recommended CIP for the next six years. In odd numbered fiscal years the County Executive presents amendments to the current CIP.

The County Council holds public hearings allowing County residents to express their opinions or concerns regarding projects recommended. After receiving public input, the Council begins its review with each category area and agency program being reviewed by a designated Council committee. Agency and OMB representatives meet with the committees to provide information and clarification where needed. The committees make recommendations to the full Council, which meets to review the recommendations and formally approve the new or amended CIP.

CIP Project Administration

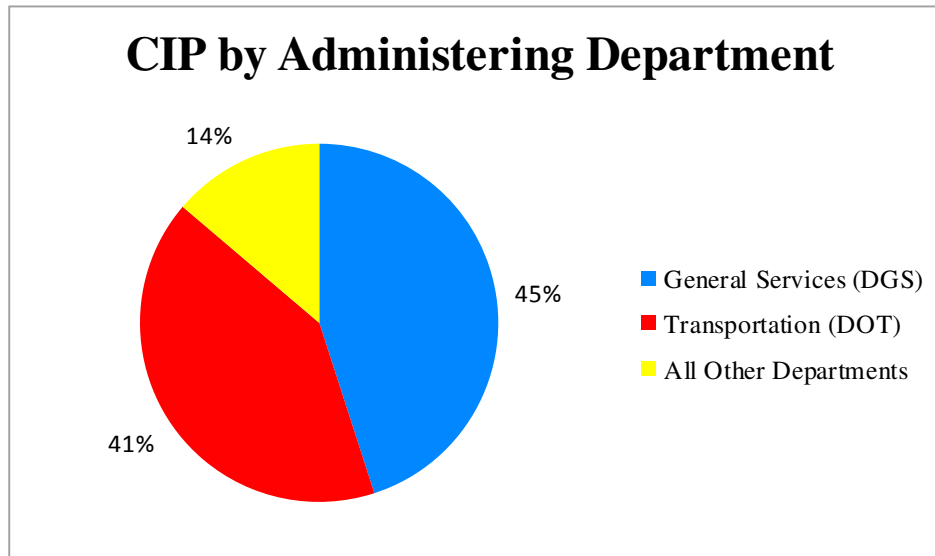
In the FY11-16 CIP the County government has identified \$2.1 billion in projects to develop and construct. The majority of project development and construction administration is performed by two departments (see table 2). The Department of General Services (DGS) supports the planning, design, construction, renovation, and replacement of facilities required by the operating departments of the County government. DGS supervises project activities, such as, site selection and design/construction coordination for facility-related projects required by other County departments including libraries, fire stations, police stations, and recreational facilities. An exception to DGS' CIP support services is the Department of Transportation (MCDOT). That department is responsible for its own CIP planning, engineering, constructing, and maintenance. This encompasses the County's transportation infrastructure including roads, bridges, transit systems, parking facilities, sidewalks and bikeways. Both departments are responsible for contracting with contractors to have the projects they administer developed or constructed. Combined, the two departments administer \$1.8 billion of the \$2.1 billion in CIP dollars allocated to the County government departments. Our review focused on the activities of MCDOT and DGS since the majority of the CIP dollars are managed by the two departments. MCDOT has unit price contracts in which the materials and labor to be used are defined in supporting schedules incorporated into the contracts. DGS had lump sum bid contracts that are fixed priced for the entire construction or remodel of a facility.

Table 2 – FY11-16 CIP by County Government Administering Department

Department	FY11-14 CIP
County Executive	\$ 87,588,000
General Services	952,491,000
Transportation	871,418,000
Economic Development	12,272,000
Environmental Protection	106,275,000
Fire/Rescue	3,042,000
Housing & Community Affairs	51,596,000
Management & Budget	24,000,000
Recreation	560,000
Technology Services	6,021,000
Grand Total	\$2,115,263,000

Source: Approved FY11-16 Capital Improvements Program (CIP) – 5/27/2010

Chart 2



Source: Approved FY11-16 Capital Improvements Program (CIP) – 5/27/2010

Invoice Review and Approval

Included in the DGS and MCDOT administration responsibilities is the review and approval of invoices related to the materials and services purchased for CIP projects. Both departments use their employees as project managers who are responsible for monitoring and overseeing the day-to-day activities of contractors hired to design, construct or renovate the various facility or road projects included in the CIP. Monthly, contractors submit to the respective project manager invoices that detail the materials and labor used in the design or construction of CIP projects. The project managers are the first to review and approve invoices submitted by contractors to ensure the County is only paying for the materials and services received in accordance with executed contracts. Both departments have procedures that project managers follow to verify the contractor invoice detail prior to approving the invoice for payment.

MCDOT uses the Maryland Construction Management System (MCMS²) to track, materials, labor and project progress to completion. Daily, MCDOT inspectors, who are on project construction sites monitoring contractor activity, enter into MCMS the type and quantity of materials and the labor used by contractors on the project. Monthly, the inspector creates an estimate of the materials and labor provided by the contractor as documented in MCMS. The inspector conducts a progress meeting with the contractor to verify the accuracy of the estimate with the contractor. After the meeting, the contractor provide MCDOT a monthly invoice that details by line item (material or labor), the total quantity to be used, contracted per unit price, quantity used to date, actual per unit price, remaining quantity to be used and remaining dollars unspent as agreed upon in the progress meeting. The inspector's review and approval of the invoice is evidenced by their signature. In addition, the inspector signs the MCMS report used to verify the invoice detail. Within MCDOT there is a staff member who reviews the submitted invoice to ensure the mathematical accuracy of the invoice and that all required supporting documentation has been properly received. Once that review is complete the area engineer or inspector supervisor performs a secondary review of the invoice. After the area engineer approves the invoice, it is forwarded to the section chief for approval. After the section chief approval, the invoice is forwarded to the Office Service Coordinator (OCS) for processing and on line approval in the County financial system.

In addition to design and construction invoices for projects, MCDOT also receives invoices for utility relocation and land acquisition. If there is a need to have utility company equipment (i.e.; poles, cable, etc.) relocated to allow for project construction and the utility company has the legal right to have their equipment on the property, the County reimburses the utility company the cost of the relocation. In the FY11-16 CIP site improvement cost, which include cost for activities, such as, utility relocation and traffic signals totaled \$40 million³ for MCDOT projects. MCDOT issues the utility company an Authorization Letter that details the agreed upon amount that the County will reimburse the utility company for the relocation. The review and approval of the utility relocation invoices are the same as design and construction invoices expect the cost is verified against the Authorization Letter and not MCMS. For some projects there is a need for MCDOT to acquire land to complete the construction of a road, road improvement or to stage a project. MCDOT has a land acquisitions section that performs land surveys, develops estimated values for land to be acquired, and negotiates the purchase of the land from land owners. In situations in which the County and the land owner cannot agree on a purchase price, the acquisition of the land becomes and legal matter, in which a judge decides what purchase price the County will pay the land owner. The payment of land acquisition fees are supported by an executed land purchase contract or court order and are approved by MCDOT Deputy Division Chief.

DGS project managers receive draft invoices from contractors that detail materials and labor used on the project. The project manager, contractor and architect perform a walkthrough of the construction site to verify the invoice details. After the meeting the contractor submits a final invoice based upon the result of the walkthrough. The project manager signs the final invoice to indicate approval. The project manager forwards the invoice to the team leader, a County employee, for secondary review and approval. Once approved by the team leader, the invoice is forward to the Office Service Coordinators for processing and on line approval in the County financial system.

² Maryland Construction Management System (MCMS) is a stand-alone database application designed to be used by construction inspectors to manage all daily construction activities and accounting, including: contract items and associated costs and usage, and all information found on the Inspector's Daily Reports (IDR): construction site details, inspector and trainee time, contractor and subcontractor activities, labor, contractor equipment and usage. The system manages change orders, additional work requests, time extensions, and stored materials. It generates contract payment statements (partial payment) taking into account retainage and liquidated damages. This system was developed for the Maryland Highway Administration Office of Construction provided to the county for use.

³ Source FY11-16 CIP amount provided by MCDOT

Scope and Methodology

We performed our review of the Capital Improvements Program in two phases. Phase I consisted of interviewing responsible officials from OMB, DGS, and MCDOT to gain an understanding of how projects were developed, estimated, and budgeted for the FY09-14 Capital Improvement Program. In addition we reviewed the policies and procedures in place to monitor (1) progress of project to completion, (2) approval of change orders, (3) review of expenditures and, (4) effectiveness of the work performed by contractors under the contracts awarded for CIP projects. Appendix B, contains a listing of individuals interviewed and documents reviewed. A test of design was conducted on a limited sample of representative CIP projects to determine if internal controls over the contracts were properly designed to meet County objectives and to avoid cost overruns. The results of testing for Phase I indicated that the internal controls over the development of projects for the CIP program and the monitoring of project cost estimates and expenditures from development to construction were functioning as designed. See Appendix C for testing details.

Based upon the Phase I results, MCIA and CBH decided for Phase II to focus on the policies and procedures regarding the review and approval of contractor invoices and the assessment that County received from contractors contractually agreed the materials and labor. The scope of our work for Phase II included FY11-16 CIP Program projects and invoices paid by DGS and MCDOT from July 1, 2010 to February 28, 2011. Appendix A contains a listing of the CIP projects the vendors selected for testing worked on. We obtained from MCDOT and DGS their respective department guidelines and procedures describing the invoice review and approval process for CIP projects.

The approach for Phase II sample selection was to identify the top 15 vendors receiving payments from July 2010 through February 2011 related to the CIP projects managed by MCDOT and DGS and selecting 2 invoices from each vendor. The materials and labor being invoiced included project design, land acquisition, and construction. In addition, we examined the review and approval of change and field orders MCDOT and DGS invoiced. In selecting the actual sample of 30 invoices we:

1. Obtained from MCDOT and DGS a data file of all invoices paid from July 1, 2010 to February 28, 2011 for CIP projects in the FY11-16 Program.
2. Identified the top 15 vendors receiving payments from July 2010 to February 2011.
3. Ensured sample population included at a minimum five vendors each for projects for MCDOT and DGS.
4. Judgmentally select two invoices per vendor for inclusion in testing sample of 30 invoices.
5. In situations where a top 15 vendor selected did not have two invoices for testing, identified the next highest vendor for department and judgmentally select one invoice for testing.

The table below details the sample distribution by department.

Table 3- Summary of Phase II Invoice Sample Distribution

Department	Invoices	Contracts	Change Order	Field Order
Department of General Services	14	9	3	2
Department of Transportation	16	16	0	0
Total Number of Invoices	30	25	3	2

Results

Our review found that MCDOT and DGS have designed procedures and internal controls for reviewing and approving invoices. However, we identified instances when procedures were not performed as designed or procedures and controls can be strengthened to further ensure the County is receiving and paying for materials and labor contracted for CIP projects. Seven of the 30 invoices tested contained a total of eight exceptions. Table 4, is a summary of the exceptions by test attribute.

Table 4- Summary of Phase II Exceptions

Attribute Tested	DGS	MCDOT	Total Exceptions
Attribute A	1	3	4
Attribute B	0	0	0
Attribute C	0	0	0
Attribute D	0	0	0
Attribute E	2	2	4
Attribute F	0	0	0
Attribute G	0	0	1
Attribute H	0	0	0
Attribute I	0	0	0
Attribute J	0	0	0
Attribute K	0	0	0
Attribute L	0	0	0
Attribute M	0	0	0
Total Exceptions	3	5	8

Total Attributes Tested	128	112	240
% of Attributes with Exceptions	2%	4%	3%
Total Exception Amount	\$6,139,231	\$1,769,048	\$7,908,279
Total Invoiced Amount Tested	\$14,102,737	\$12,705,592	\$26,808,329
% Exception of Invoiced \$	45%	13.9%	29%
Number of Invoices with exceptions.	2	5	7
Total invoices tested	14	16	30
% Invoices with Exceptions	14%	31%	23%

All 30 invoices and other supporting documentation were reviewed for evidence of the following seven attributes:

- A. Invoice amount was reasonable and accurate in comparison to Project Manager records and contract.
- B. For selected invoice sample line items, unit pricing agrees to initial contract or approved change/field order.
- C. For selected invoice sample line items, recalculated extended cost agrees to invoice.

- D. Evidence was retained supporting Project Manager's review of invoice in comparison to records.
- E. If applicable, invoice was reviewed and approved by Project Manager's Team Leader or Supervisor.
- F. If applicable, financial approval was obtained for invoice prior to submission to Accounts Payable.
- G. Invoice amount agrees to amount paid.

Five of the invoices that were found to include charges for Field and Change Orders and were reviewed for evidence of these six additional attributes:

- H. Adequate documentation exists to support the field/change request.
- I. Order resulted from omission from original project design or project scope.
- J. Order appears reasonable and in accordance with project scope.
- K. Order did not provide benefits beyond project defined requirements.
- L. Proper supervisor and/or management approvals have been obtained.
- M. Review of CIP status report indicates that need was reported or discussed prior to modification approval.

Based on our review we identified findings in four areas.

1) MCDOT Invoice Approval – Incomplete or Inadequate Invoice Support for Utility Relocations

Evidence of MCDOT's agreement to reimburse utility companies the amounts invoiced for utility relocations could not be provided. Two payments, which totaled \$ 1 million, to Verizon for relocating cables were not supported by any documentation evidencing MCDOT's agreement to reimburse Verizon for the expenses incurred. MCDOT did not have an opportunity to review or pre-authorize the relocation expenses prior to Verizon performing the relocation, due to a delay in Verizon confirming its rights to the property on which the cables resided. Upon Verizon's submitting a claim for prior rights⁴ to the property and therefore being entitled to reimbursement for the relocation by the County, MCDOT did perform proper due diligence to confirm Verizon's rights to the property. However, the performance of additional due diligence, such as meetings with the Verizon, to determine the reasonableness of the expenses being reimbursed was not formally documented. Typically when MCDOT provides pre-authorization for utility relocation, MCDOT receives a cost estimate from the utility company to support the amount authorized for reimbursement. While department management confirmed that MCDOT staff have access to budget estimates and historical cost to determine if cost being sought for reimbursement are reasonable, the department does not have internal expertise to perform detail reviews of cost details that could be provided by utility companies to support charges being invoiced. MCDOT's limitation in how much utility relocations cost can be scrutinized does expose the County to the potential that incorrect or improper billing by the utility company would not be detectable.

Regarding a third relocation payment, MCDOT could not provide us with it's agreement to reimburse \$700,400 to PEPSCO for relocating twelve wood poles. In March 2006, MCDOT issued a letter granting authorization for PEPSCO to proceed with the relocation of the poles for an estimated cost of \$316,800 which included a ten percent contingency. In January 2007, MCDOT received a communication from PEPSCO

⁴ During the design phase of project, when it is determined that utilities must be relocated, MCDOT tries to establish who (County, utility company or state) has ownership or prior rights to the property where the utilities reside. If a utility company owns or has rights to the property, MCDOT will usually agree to reimburse the utility company the cost for relocating its equipment. If the utility company does not own or have rights to the property the County does not have to reimburse the relocation expenses.

informing the department that the estimate of the relocation cost had increased to \$640,000. In January 2009, PEPCO submitted an invoice for \$700,400 seeking reimbursement of its expenses in performing the relocation. The invoice was approved for payment by the project manager and section chief and a partial payment of \$316,800 was made. However, MCDOT could not provide us with any documentation to support its agreement to pay PEPCO any additional cost beyond the \$316,800 that was authorized in March 2006. In addition, the need to make the second payment of \$383,500 is questionable since the County's agreement or obligation to PEPCO is not clearly documented or established in the project records. Without verifying the invoice details prior to authorizing payment the County could potentially pay for work that the utility company is not entitled to be reimbursed.

The full payment of project expenses for utility relocation to PEPCO of \$700,400 was delayed for 18 months in violation of County policy. In August 2009, MCDOT intentionally split payment of the PEPCO utility relocation invoice into two payments. The first payment of \$316,800 was made in August 2009, while the second payment of \$383,500 was not made by MCDOT until December 2010, 18 months after approval to pay invoice was provided. The need to make the second payment was not recognized until a past due invoice was submitted by the utility company in December 2010. Per the *Code of Montgomery County Regulations Section 11B-34. Payment of Invoices: interest.*

(b) It is the policy of the County to make a payment under a contract within 30 days after the day that that:

(1) payment becomes due under the contract;

(2) the County contract administrator⁵ received a proper invoice; whichever is later

A rationale for delaying the second payment was not documented in the project file and MCDOT could not provide that to us. We could not determine if the delay of the second payment was related to the PEPCO invoice being questioned since it was in excess of the reimbursement amount authorized by MCDOT. In addition to not complying with County policy, by delaying paying a vendor the actual cash outlay for a capital project may not match the budgeted/expected capital budget outlay for a fiscal year.

2) DGS Invoice Approval - Gap in Documenting Key Internal Control Procedures Performed

After contract execution, DGS require contractors to provide a Schedule of Values detailing the contract cost by division (i.e., concrete, plumbing, electrical, etc.). Currently, Schedule of Values submitted by the contractors does not contain extensive details regarding the quantity of materials or labor to be used. DGS instructs the contractors to provide the material and labor details when invoicing for work performed. Monthly, the DGS project manager and contractor meet in person to review the contractor invoice by walking through the construction site to visually inspect the work performed by the contractor and verify the invoice material and labor details. After the walkthrough the contractor revises their invoice based upon changes provided by the project manager. The contractor submits the revised invoice for payment. The DGS project manager will verify that the contractor made the requested changes and sign the invoice to note approval.

The performance of the walkthrough is a key internal control activity that establishes what expenses will be ultimately paid by the County. Currently, the performance of the walkthrough and any significant matters or changes resulting therefrom is not documented either through retention of the marked draft invoice or a memo to the files. This information, including the rationale for any significant decisions made may be useful in the event that there issues in the future including the types of lapses in the invoice approval process described under results number 3 below.

⁵ Contract administrator is the person designated in the contract to accept invoices on behalf of the County for goods, service, or construction provided

Table 5 presents an example of the variances noted when we compared the original schedule of values from when the contract was executed to the schedule of values included on an invoice for the White Oak Community Recreation Center. While the subtotal for Division 3 did not change, the costs were reallocated from several original line items to new line items. Table 6 details the invoice line items we reviewed as part of the detail testing. An example of line item cost that could not be traced from the invoice Schedule of Values to the contract Schedule of Values are 30 00 *Cast in Place Concrete (Footings)* and 39 00 *Concrete Curing*.

Table 5 – Summary of Values Comparisons in Dollars

Item No.	B	C		
	DESCRIPTION OF WORK	Original Scheduled Value	SOV on Invoice 03PO0363200144	Difference
1	General Conditions	636,200	636,200	-
2	Performance and Payment Bond	97,000	97,000	-
3	Mobilization	50,768	50,768	-
	DIVISION 1 SUBTOTAL	783,968	783,968	-
4	Reinforcing - Material	325,667	325,667	-
	BUILDING RETAINING WALL			
5	Forms - Material	114,000	114,000	-
6	Footings - Concrete and Labor	152,424		(152,424)
7	East Retaining Wall - Conc/Labor	241,261	241,261	-
8	South Retaining Wall - Conc/Labor	172,292	172,292	-
9	North Retaining Wall - Conc/Labor	108,718	108,718	-
	SITE RETAINING WALLS			
10	Site Retaining Walls - Conc/Labor	71,535		(71,535)
	BUILDING CONCRETE			
11	Footings	63,811		(63,811)
12	Slab on Grade - Gravel/Vap Barrier	73,000		(73,000)
13	Slab on Grade - Form and Pour	101,673		(101,673)
14	Slab on Grade - Finish/Cure	51,537		(51,537)
15	Slab on Deck - Place	47,000		(47,000)
16	Slab on Deck - Finish/Cure	30,739		(30,739)
17	Precast U-Lintels - Material	500	500	-
	30 00 Cast in Place Concrete (Footings)		216,235	216,235
	30 00 Cast in Place Concrete (Slab on Grade)		221,673	221,673
	30 00 CIP (Retaining Walls - West)		71,535	71,535
	35 13 High Tolerance Concrete Floor Finishing		79,439	79,439
	39 00 Concrete Curing		2,837	2,837
	DIVISION 3 SUBTOTAL	1,554,157	1,554,157	-

Table 6 – Summary of Values – Line Item Testing in Dollars

B		
DESCRIPTION OF WORK	SOV on Invoice 03PO0363200144	Current Period Billing
General Conditions	636,200	45,443
DIVISION 1 SUBTOTAL		45,443
Reinforcing - Material	325,667	164,430
Forms - Material	114,000	78,679
East Retaining Wall - Conc/Labor	241,261	72,378
South Retaining Wall - Conc/Labor	172,292	51,687
North Retaining Wall - Conc/Labor	108,718	54,363
30 00 Cast in Place Concrete (Footings)	216,235	72,873
39 00 Concrete Curing	2,837	500
DIVISION 3 SUBTOTAL		494,910
20 00 Unit Masonry (Structural Walls - East)	247,647	4,000
DIVISION 4 SUBTOTAL		4,000
Metal Doors and Frames - Material	51,011	2,000
DIVISION 8 SUBTOTAL		2,000
20 00 Earth Moving (Excavation)	227,050	114,638
20 00 Earth Moving (Backfill)	247,050	112,383
Division 31 SUBTOTAL		227,021
41 00 Storm Drainage	266,503	129,229
DIVISION 33 SUBTOTAL		129,229

As a result of this issue being raised during audit field work, DGA management performed a self-review of its current construction procedures and developed procedures changes and new contractor requirements. The Two-Phase construction process has divided the construction execution process into two phases. In the first phase contractor will be required to provide DGS with project control documentation which includes Schedule of Values, Initial Schedule and Quality Control Plan. Once the documentation has been submitted and approved by DGS, the contractor will be given authorization to start construction.

3) DGS and MCDOT Invoice Approval – Lapses in the Invoice Approval Process

CBH noted four instances in which \$6, 676, 343 of invoices (\$6,306,106 for DGS and \$370,237 for MCDOT) were processed for payment without evidence of review or approval by both a project manager and a team lead supervisor. Both DGS and MCDOT require invoices be first reviewed and signed off by the project manager with a secondary review and approval by a team lead or supervisor. For the two DGS invoices the team lead, in the absence of the project manager, signed as both the project manager and team lead. The project manager did not sign the invoice to indicate performance of the initial review. The team lead should not have signed the invoice until the project manager had signed to indicate completion of the first review.

One of the DGS invoices included charges for a change order that had not been approved. The change order was still under negotiation and was inadvertently approved for payment by DGS. In addition, the contractor had overcharged the County on the change order by \$13,000. The MCDOT invoices did not have secondary approval evidence on the invoice. Non-performance of the control activity as designed reduces the likelihood of detecting errors or improper of charges from contractors.

Table 7 – Invoice Approval Exceptions

Department	Invoice Amount	Project Manager Approval	Team Lead or Supervisor Approval
DGS*	\$2,631,168.00	N	Y
DGS	\$3,674,938.00	N	Y
MCDOT	\$357,653.38	Y	N
MCDOT	\$12,584.50	Y	N

* \$550,000 in charges related to an unapproved change order was included in the invoice. The County was subsequently credited for the \$13,000 it was overcharged for the change order.

Conclusion

MCDOT and DGS each have designed and implemented internal controls to ensure the department evaluates contractor invoices and that it is receiving the quality and amount of goods or services associated with invoices. The vast majority of the invoices we tested were in compliance with the designed controls. However, our audit disclosed that weaknesses in the performance of controls exist and there are opportunities to further strengthen controls. We believe that the recommendations described below will provide MCDOT and DGS an effective means of addressing the issues outlined in the report.

Recommendations

We are making seven recommendations to improve internal controls over invoice review and approval for capital projects. CBH recommends that:

The Director of MCDOT:

1. Develop and enforce specific requirements to ensure the basis for utility cost approval, such as professional judgment, project estimate, direct discussion with utility company, and pre authorizations are properly documented.

2. Evaluate and determine the staffing or contracting needs to have utility costing expertise to perform detail reviews and analysis of cost being charged by utility companies for relocation of equipment. Since this type of expertise would also be beneficial to DGS in the procurement of utility services, effort should be made to include DGS in the evaluation and determination of staffing needs to identify opportunities to leverage such a resource across departments.
3. Establish a requirement that the basis for withholding payment from contractors be documented in the project file and communicated to the contractor. In addition, establish a tracking mechanism that ensures timely and appropriate follow-up to facilitate ultimate resolution.

The Director of DGS:

4. After complete implementation of the Two-Phase construction process, perform a post implementation evaluation to ensure that the contractor submitted "Schedule of Values" fully details the contractor expected material and labor quantities or task specific line items (based on the nature of the contract) prior to them being invoiced.
5. Document and retain the results of the project manager and contractor invoice walkthrough meeting in a manner sufficient to capture any significant decisions or changes resulting from that meeting.
6. Reinforce with DGS staff that change order charges should not be accepted on contractor invoices or approved for payment until the change order has been approved by management.

The Directors of MCDOT and DGS:

7. Reinforce with MCDOT and DGS staff involved with the review, approval, and processing of invoices the importance of ensuring:
 - a. All required project manager and supervisor level invoice reviews are performed and performance evidenced by required sign off on the invoice.
 - b. Invoices are not processed for payment without the required approval signatures from a project manager, a supervisor or team lead or designated alternative approver

Comments and MCIA Evaluation

We provided MCDOT and DGS with a draft of this report for review and comment on August 18, 2011. MCDOT responded with comments on August 30, 2011 and DGS submitted responses on September 2, 2011. The responses from both departments have been incorporated in the report at Appendix D. MCDOT and DGS concurred with the applicable recommendations contained in the report.

Appendix A: Project Listing

Listed below are the Capital Improvements Program projects for the sample invoices we selected for testing.

Table 1 – Project Listing

Project	Administering Department	FY11-14 CIP Cost (\$000s)
401 Hungerford Drive Garage Restoration	DGS	\$5,408
Brookville Service Park	DGS	\$17,913
East Germantown Fire Station	DGS	\$16,262
Silver Spring Civic Building	DGS	\$14,004
Silver Spring Transit Center	DGS	\$95,596
Takoma Park Fire Station	DGS	\$11,086
White Oak Community Recreation Center	DGS	\$24,330
ADA Compliance: Transportation	MCDOT	\$158,881
Chapman Avenue Extended	MCDOT	\$12,928
Clarksburg Road Bridge	MCDOT	\$1,632
Fairland Road	MCDOT	\$10,945
Father Hurley Boulevard Extended	MCDOT	\$22,169
Goshen Road Improvements*	MCDOT	\$123,610
MD 355 Underpass*	MCDOT	\$2,431
Montrose Parkway West	MCDOT	\$76,297
Transportation Improvements for Schools	MCDOT	\$1,564
US 29 Sidewalks	MCDOT	\$5,576
Watkins Mill Road East Extended	MCDOT	\$7,672
Woodfield Road Extended	MCDOT	\$13842

Source: Approved FY11-16 Capital Improvements Program (CIP) – 5/27/2010

**Source: Amended FY09-14 Capital Improvements Program (CIP) – July 2009*

*This project was Pending Close or Close Out under the FY09-14 Program

Appendix B: Additional Information on Review Methodology

Interviews Conducted

We held an initial entrance meetings with the Office of Management & Budget (OMB), the Department of Transportation (MCDOT), and Department of General Services (DGS) as well as subsequent meetings with key Office and department personnel responsible for CIP activities. MCDOT Table 2 below lists the primary personnel by title that participated in interviews during our audit of CIP.

Table 2 – Interview Listing

Position Title	Process Role
CIP Manager, OMB	Oversees the OMB staff in the review and analysis of capital program requests from departments and the development of the County Executive recommended Capital Improvements Program
Manager, OMB	Oversees the OMB staff in the review and analysis of capital program requests from departments and the development of the County Executive recommended Capital Improvements Program
Senior Analyst, OMB	Reviews project packets submitted by the departments ensuring adequate support and justification. Creates and finalizes project packets in system, performs triage and helps produce final project estimates.
Management and Budget Specialist, OMB	Oversees the OMB staff in the review and analysis of capital program requests from departments and the development of the County Executive recommended Capital Improvements Program
Deputy Division Chief, MCDOT	Reviews the implementation of projects, oversees issues and if project schedule is on time. Helps resolve issues on project design, property acquisition, contracting, project staffing, construction timing, and materials. Oversees the preparation of CIP every two years for new and updated projects.
Section Chief, MCDOT	Prepares contract documents to advertise project during construction and make sure it is within scope. Supports project design, planning and scope by providing review of plans, cost estimate for 30% and 70% complete and complete timing schedule on contract. Performs secondary review of contractor and utility relocation invoices and provides final department approval to pay invoices.
Assistant Section Chief, MCDOT	Prepares contract documents to advertise project during construction and make sure it is within scope. Supports project design, planning and scope by providing review of plans, cost estimate for 30% and 70% complete and complete timing schedule on contract.

Position Title	Process Role
Management Services Supervisor, MCDOT	Prepares projects for submission into CIP system. Develops program preparation and submission calendar for the MCDOT department based upon OMB schedule. Reviews all of the divisions CIP project submission packets. After review, CIP package is sent back to respective department for correction and is resubmitted for a second review. Coordinates responses to follow up questions from OMB to MCDOT division. Acts as the main liaison between OMB and MCDOT. Prepares reports and keeps MCDOT Director and Deputy Director informed of major changes or issues regarding CIP program development and submission.
Assistant Chief, DGS	Oversees the selection, development, and construction of capital program projects for the department. Serves as the primary monitor of capital program projects progress to completion.
Project Managers, DGS	Responsible for the development of projects for the CIP program. The Project Managers also oversee the design and construction of projects. In addition, they review and approve contractor's invoices.

Documentation Reviewed

Documentation we reviewed as part of the audit is presented in Table 3:

Table 3 – Document Review Listing

Document Reviewed
Phase I
CIP Budget Manual for FY 11-16
CIP Submission Guidance - August 2009
CIP Submission Manual - June 2009
OMB CIP Process Flowchart
FY09-14 CIP Submission Highlights Powerpoint
CIP Info Bulletins

ERP Flowcharts
Training - FY 11-16 Triage and Packet Preparation
FY11-16 Training and Information Bulletins List
MCDOT CIP Progress Report - August 2010
Memo from County Executive to County Council for CIP Projects - January 2010
Example Documentation from a New MCDOT CIP Project Proposal
Monthly MCDOT Status Memo sent to County CAO - July 2010
Example MCDOT Contractor's Progress Report
Example MCDOT County Stat Submission
MCDOT Division of Transportation Engineering Organizational Chart
MCDOT CIP Expenditure Report FY 10
Maryland Construction Management System (MCMS) User's Guide
Example of Cost Overrun/Underrun Report
MCDOT Transportation Project Procedure
MCDOT FY11-16 CIP Submission to OMB

DGS Performance Review Powerpoint - November 2009
DGS Building CIP Report - August 2010
DGS CAO Briefing - August 2010
Example DGS Project Cost and Budget Workbook
DGS Project Budget & Cost Management PowerPoint
DGS Project Cost Control PowerPoint
MCDOT Construction Directive Regarding Documentation and Review of Pay Quantities
MCDOT Construction Directive Regarding Procedures for Preparation of Contractor's Estimates
MCDOT Construction Directive Regarding Monthly Job Site Progress Meetings
DGS Invoice Processing Procedure
Phase II
DGS and MCDOT listing of invoices paid in FY11 for CIP projects in the FY11-16 Program
Project Contracts
Project Change Orders & Supporting Documentation
Project Field Orders & Supporting Documentation
Project Schedule of Prices/Values
Contractor Invoices & Supporting Documentation

Appendix C: Phase I Summary

Procedures performed as part of Phase I of the audit included a walkthrough of one project from Department of Transportation (MCDOT) and Department of General Services (DGS). The purpose of the walkthroughs was to review the documentation that evidence performance of procedures and internal control activities related to Capital Improvements Program (CIP) project development, cost estimation, cost monitoring, and status monitoring. Below is a summary of the procedures performed and results per project.

Procedures Performed	Walkthrough Results	
	<i>DGS – White Oak Community Recreation Center (CIP No. 720101)</i>	<i>MCDOT – Father Hurley Blvd Extended (CIP No. 500516)</i>
1. Reviewed CIP project submission package to determine if all required documentation was submitted, the sufficiency and accuracy of cost estimation calculation and evidence of proper approval.	All required documents were submitted, cost estimate calculation was accurate and proper approval was evidenced.	All required documents were submitted, cost estimate calculation was accurate and approval was evidenced.
2. Reviewed project submission package by Office of Management and Budget (OMB) CIP Analyst to determine if all checklist procedures were performed, cost estimate was verified, and evidence of proper approval.	All checklist procedures were performed, cost estimate was verified and proper approval was evidenced.	All checklist procedures were performed, cost estimate was verified and proper approval was evidenced.
3. Compared project cost estimate from department submission to County Executive Recommended Capital Budget and FY09-16 CIP to determine if variances, if existing, were properly supported and approved.	A variance between the project cost estimates was noted. The variance was due to the County Executive and department agreeing to reduce the project cost estimate being included in the recommended program.	No variance was noted between cost estimates.
4. Compared project cost estimate from County Executive Recommended Capital Budget and FY09-16 CIP to County Council Capital Budget Resolution for FY09 Capital Budget	There was no variance noted between the cost estimates	There was no variance noted between the cost estimates

Procedures Performed	Walkthrough Results	
and FY09-16 CIP to determine if variances, if existing, were properly supported and approved.		
5. Reviewed project contract and current contract cost as August 2010 to determine if current cost estimate was greater than contract value, if so, was potential project overrun reviewed by management, and was contract modification properly prepared, supported and approved.	The current project cost estimate was lower than the contract value. The project was not in overrun status. The project had no modifications	The current project cost estimate was not greater than contract value and not in overrun status. The project had no modifications.
6. Reviewed the August CIP status reports to determine if details of project status were accurately included in report and discussed with County Executive.	Project was included in report and meeting notes indicate discussion regarding transfer of unused funds to another project.	Project was included in report

Appendix D1: Responses to Review - MCDOT



DEPARTMENT OF TRANSPORTATION

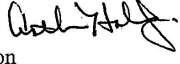
Isiah Leggett
County Executive

Arthur Holmes, Jr.
Director

MEMORANDUM

August 30, 2011

TO: Larry Dyckman, Manager
Government Compliance Office of Internal Audit

FROM: Arthur Holmes Jr., Director 
Department of Transportation

SUBJECT: MCDOT -DTE Internal Audit - August 18, 2011

Comments concerning Capital Improvement Program - MCDOT and DGS have good internal controls for invoice review but improvements are needed. MCDOT thanks Cherry, Bekaert & Holland, L.L.P., for performing the audit and providing recommendations to improve our internal controls over invoice and approval for capital improvement projects.

1- Develop and enforce specific requirements to ensure the basis for utility cost approval, such as professional judgment, project estimate, direct discussion with utility company, and pre authorizations are properly documented.

DOT will ensure that pre authorizations are properly documented for all their projects. DOT will re-visit its specific requirements to ensure the basis for utility cost approval. Updates will be provided to the project managers once the reevaluation is performed.

2- Evaluate and determine the staffing or contracting needs to have utility costing expertise to perform detail reviews and analysis of cost being charged by utility companies for relocation of equipment. Since this type of expertise would also be beneficial to DGS in the procurement of utility services, effort should be made to include DGS in the evaluation and determination of staffing needs to identify opportunities to leverage such resources across departments.

DOT will evaluate the contracting needs to have utility costing expertise perform detail review and analysis of cost being charged by the utility companies. This will be a new process for DOT, so implementation and cost effectiveness will be evaluated.

Office of the Director

101 Monroe Street, 10th Floor • Rockville, Maryland 20850 • 240-777-7170 • 240-777-7178 FAX
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Located one block west of the Rockville Metro Station

Larry Dyckman
August 30, 2011
Page 2

3- Establish a requirement that the basis for withholding payment from contractors be documented in the project file and communicated to the contractor. In addition, establish a tracking mechanism that ensures timely and appropriate follow-up to facilitate ultimate resolution.

DOT will evaluate and determine the best method to incorporate a withholding and tracking mechanism for projects that fit in this category.

4- Reinforce with MCDOT and DGS staff involved with the review, approvals, and processing of invoices the importance of ensuring:

- a. All required project manager and supervisor level invoice reviews are performed and evidenced by required sign off on the invoice.
- b. Invoices are not processed for payment without the required approval signatures from a project manager, a supervisor or team lead, or designated approver.

DOT will reinforce the review, approvals, and processing of invoices with all staff involved in the process.

AH:gl:tt

cc: Edgar Gonzalez, DOT
Al Roshdieh, DOT
Bruce E. Johnston, DOT, DTE
Holger Serrano, DOT-DTE

Appendix D2: Responses to Review - DGS



DEPARTMENT OF GENERAL SERVICES

Isiah Leggett
County Executive

David E. Dise
Director

MEMORANDUM

September 1, 2011

TO: Larry Dyckman, Manager, Office of Internal Audit

FROM: David E. Dise, Director, Department of General Services (DGS) ²

SUBJECT: Draft audit report on CIP Invoice Review – DGS formal comment

Following are DGS' responses to the four recommendations (Nos. 4 through 7) relevant to DGS as identified in the referenced draft audit report:

4. After complete implementation of the Two-Phase construction process, perform a post implementation evaluation to ensure that the contractor-submitted "Schedule of Values" fully details the contractor expected material and labor quantities, or task-specific line items (based on the nature of the contract) prior to them being invoiced.

DGS concurs with Recommendation # 4.

5. Document and retain the results of the project manager and contractor invoice walkthrough meeting in a manner sufficient to capture any significant decisions or changes resulting from that meeting.

DGS concurs with Recommendation # 5.

6. Reinforce with DGS staff that change order charges should not be accepted on contractor invoices or approved for payment until the change order has been approved by management.

DGS concurs with Recommendation # 6.

7. Reinforce with ... DGS Staff involved with the review, approval and processing of invoices the importance of ensuring:
 - a. All required project manager and supervisor level invoice reviews are performed and performance evidenced by required sign off on the invoice.

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- b. Invoices are not processed for payment without the required approval signatures from a project manager, a supervisor or team leader, or designated alternative approver.

DGS concurs with Recommendation # 7.

Please let me know if you have any questions.